

(3) REMARKS

Novelty and Unobviousness

Claims 1-7 have been rejected under 35 USC 102(b) as anticipated by or, in the alternative, under 35 USC 103(a) as obvious over U.S. Patent No. 5,391,629 to Turner et al.

It will be helpful to the examiner to know that Turner et al corresponds to JP-A-9-500150 discussed in the specification at page 3, lines 4-10 and WO 94/21700 filed with the Information Disclosure Statement dated February 8, 2002 (see International Search Report). It should be noted that the polymers described there exhibit molecular weight distributions of from 1.35 to 4.1, well outside the range of up to 1.3 obtained by the invention and without a teaching or suggestion to modify the process therein to obtain a more uniform molecular weight distribution.

Turner et al discloses a process for polymerization of olefins using a catalyst system comprising a hafnium or zirconium compound containing at least one cyclopentadienyl ligand and a borate compound at a temperature of -80 to 80°C, preferably -10 to 20°C.

However, firstly, Turner et al does not teach or suggest using a borane compound of the formula $B(Ph)_3$ as an activator, namely a hafnocene/borane catalyst system and a zirconocene/borane catalyst system. Thus, without the specific catalyst system identified by the reference, the person skilled in the art would find it necessary to do more than selection or optimization to obtain the present invention. The person skilled in the art is not provided guidance to select the specific catalyst system in a low

temperature process to produce polymers having a more uniform distribution of molecular weight size than is taught by the reference.

Further, Turner et al does not teach or suggest that living polymers can be produced by carrying out polymerization of olefins using a hafnocene/borane or zirconocene/borane catalyst system at a low temperature of -20°C or less.

Accordingly, the process of the present invention as claimed in claims 1 to 7 is not anticipated by and is not obvious from Turner et al.

Applicant has made a significant advance in the art of preparing olefinic living polymers. The claims clearly and concisely set this invention out in terms that patentably distinguish from the prior art. Accordingly, reconsideration and allowance of all claims are believed in order, and such actions are earnestly solicited.

Respectfully submitted,

A handwritten signature in black ink, reading "Francis J. Maguire". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

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